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Title:	Landscape of the Quarkonia Puzzle
Author(s):	Leitch, Michael J.
Intended for:	Workshop on Quarkonia in Deconfined Matter, 2011-09-27/2011-09-30 (Acitrezza/Catania, , Italy)

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Link to Instructions

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Landscape of the Quarkonia Puzzle

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☐ Summary ☐ Poster
☐ Audio-Visual (*abstract required*)
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Intended for:

☐ Journal ☐ Proceedings ☐ Meeting ☒ Talk ☐ Book ☐ World-wide Web
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Particulars: (**see point # 4 of instruction sheet.**)

Meeting/Conf. Name: Workshop on "Quarkonia in Deconfined Matter
City, State, and Country: Acitrezza/Catania, Italy Mtg. Date: 9/27-30/11
Journal Name: N/A
Other: _____

5. Research sponsored by

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Program Code used for this work: 3R050A/E9BB

6. Deadline Date: 7/29/11

Z Number, name, e-mail, and phone number of contact for notification of release:
088743, Michael J. Leitch, leitch@bnl.gov, 505-667-5481

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LA-UR-2011-

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Title:	Landscape of the Quarkonia Puzzle
Author(s):	Michael J. Leitch Group P-25, Subatomic Physics Los Alamos National Laboratory
Intended for:	Invited talk at the workshop "Quarkonia in Deconfined Matter" Acitrezza/Catania, Italy 27-30 September, 2011.

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Form 836 (7/06)

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Landscape of the Quarkonia Puzzle

Michael Leitch, LANL

I will discuss the current status of the study of Quarkonia as a tool for understanding Cold Nuclear Matter effects and for determining the screening length in the Quark-Gluon Plasma (QGP). These studies comprise a puzzle with many different physics effects needing to be understood in order to isolate the most interesting fundamental physics - i.e. that associated with gluon saturation in nuclei and with the screening length in the Quark-Gluon Plasma. I will review quarkonia suppression in nucleus-nucleus collisions, the strong cold nuclear matter effects seen in deuteron-nucleus and proton-nucleus collisions, their effect on suppression seen in nucleus-nucleus collisions, and discuss the next steps in solving the quarkonia puzzle with upgrades of the detectors at RHIC.